CW#117: Graphical Solutions

Geometry

Due: Wednesday May 4th, 2016

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP:\_\_\_\_\_

Failure to show work will result in LsSalle.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. A rental car company is running two specials. Customers can pay $40 to rent a compact car for the first day plus $10 for each additional day, or they can rent the same car for $20 the first day and $15 for every additional day beyond that. Daniel notices that, given the number of additional days he wants to rent the car for, the two specials are equivalent. How many additional days does Daniel want?  Write a system of equations, graph them, and type the solution.   |  |  |  | | --- | --- | --- | | x | Option 1 | Option 2 | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |   Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.17.33 PM.png |
| 2. Two groups of workers are painting a bridge in the bay. The first group is responsible for painting the north side of the bridge, and the second group is responsible for painting the south side of the bridge. The first group has already painted 3 kilometers of the bridge and is painting 3 additional kilometers per day. The second group has already painted 5 kilometers of the bridge and is painting 2 additional kilometers per day. When the two groups have painted the same amount of the bridge, how much of the bridge will they each have painted?  Write a system of equations, graph them, and type the solution.   |  |  |  | | --- | --- | --- | | x | North | South | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |   Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.20.26 PM.png |
| 3. Emilio and his mom are planting vegetables in their garden. Emilio has finished planting 2 rows of carrots so far and is planting new rows at a rate of 4 rows per hour. His mom has finished 6 rows of tomatoes and will continue planting at 2 rows per hour. Once the pair get to the point where they have finished the same number of rows, they will take a break and decide what to plant next. How many rows will they each have completed?  Write a system of equations, graph them, and type the solution.   |  |  |  | | --- | --- | --- | | x | Emilio | Mom | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |   Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.21.53 PM.png |
| 4. The Muchin Mountain Lions are having team shirts made. One option is to pay Rebecca's Tees a $50 setup fee and then buy the shirts for $10 each. Another option is to go to City Printing, paying $40 for a setup fee and an additional $12 per shirt. The team parent in charge of the project notices that, with a certain number of shirts, the two options have the same cost. How many shirts is that?  Write a system of equations, graph them, and type the solution.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.22.34 PM.png |
| |  |  |  | | --- | --- | --- | | x | Sara | Kayla | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |   5. Two classmates have decided to read all the volumes in a popular series of books. Sara has already read 10 volumes and will continue to read new ones at a rate of 2 volumes per week. Kayla, who hasn't started reading the series yet, will read 3 volumes per week. At some point, Kayla will catch up with Sara and they will be reading the same book. How many volumes will each girl have read by then?  Write a system of equations, graph them, and type the solution.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.23.24 PM.png |
| 6. Michelle has $150 in her retirement account, and Mark has $200 in his. Michelle is adding $20 per day, whereas Mark is contributing $15 per day. Eventually, the two accounts will contain the same amount. How long will that take?  Write a system of equations, graph them, and type the solution.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.23.59 PM.png |
| 7. Ernesto and Ana are making presentations for a class project. Ernesto's slideshow starts with a verbal introduction that is 20 seconds long, and then each slide is left up for 3 seconds. Ana leaves each slide onscreen for 4 seconds, and her introduction lasts 10 seconds. Ernesto and Ana notice that their presentations have both the same number of slides and the same duration. How many slides are in each presentation?  Write a system of equations, graph them, and type the solution.   |  |  |  | | --- | --- | --- | | x | Ernesto | Ana | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |   Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.24.51 PM.png |
| 8. A company that teaches self-improvement seminars is holding one of its seminars in Chicago. The company pays a flat fee of $300 to rent a facility in which to hold each session. Additionally, for every attendee who registers, the company must spend $20 to purchase books and supplies. Each attendee will pay $50 for the seminar. Once a certain number of attendee register, the company will be breaking even. What will be the company's total expenses and revenues?  Write a system of equations, graph them, and type the solution.   |  |  |  | | --- | --- | --- | | x | Rent (Costs) | Registration (Income) | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |   Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-05-01 at 9.25.33 PM.png |